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## LECTURES ON THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST.

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### LECTURE IX. CONTINUED.—*Bronchitis.*

THE treatment is also modified by the age. In bronchitis attacking adults, bleeding from the arm is the best means of depletion,—while in children its advantages are very questionable, and it may sometimes be positively injurious. Local depletion is decidedly preferable. Children, who have passed the age of two years, may be treated by general bleeding; but, before this age, it should almost never be practised. I have very rarely found it necessary to bleed an infant suffering with disease of the chest; indeed, in these affections I only bleed as an exception. Nauseating expectorants are the remedies which have been found most generally beneficial in these affections. Among these, ipecacuanha holds the first rank: this is given in the form of a wine, or, what is still better, a syrup. When much mucus is present in the tubes, it is sometimes useful to give it in doses sufficient to produce vomiting, thus favouring the tendency which already exists: by this act the mucus is thrown off, and it is the only way in which children can rid themselves of it, as they cannot expectorate. It is generally, however, used in small doses, which act upon the skin and other secretions without producing much nausea. Antimonial wine is also used in the treatment of this affection, but I prefer the wine of ipecacuanha in the greater number of cases. The former is a more powerful remedy, and in very severe cases more reliance can be placed on it; but it is, on the other hand, more liable to induce inflammation of the mucous membrane of the stomach and intestines. Squills is also a remedy in common use in the pectoral affections of children, and is usually kept in families in the form of syrup. In cases which do not yield at once we have recourse to other remedies as adjuvants, such as mild sinapisms applied to the chest, legs, and ankles. A very good one is readily prepared by wetting a cloth with vine-

gar, and sprinkling it with mustard: blisters I do not consider to be so efficacious as the milder stimulants long continued. Another very important point in the management of this affection is, that the child be not suffered to remain too long on its back, as this position promotes the development of lobular pneumonia, in consequence of the mucus gravitating to the inferior portion and accumulating in the small tubes, which renders aeration imperfect, and thus favours, if it does not produce, the congestion of the lung which ends in pneumonia. The child should not be allowed to lie on its back for a longer period than two hours. This direction may appear to be trivial, but it is of much importance, for I have known death to occur from a neglect of this precaution.

As regards the quantity of blood, one or two ounces may be taken from a child under two years of age; as a general rule, an ounce for a year will answer very well. In judging of its immediate effect, you must be guided by the paleness of the patient, and not by the pulse. Sometimes a very small loss of blood produces a very decided effect upon children; therefore they should not be leeches or bled except under your immediate inspection, for cases of death, from leech-bites, have occurred among children. Cups are better than leeches, after the child has passed the age of seven years.

### BRONCHITIS OF OLD MEN.

The bronchitis with which those advanced in age so frequently suffer, is an affection presenting much variety of form. In the first place, it varies as regards the affected portion of the bronchial tubes. It sometimes attacks the smaller tubes, and then it simulates pneumonia. Indeed, it is often called peripneumonia notha. The patient suffers excessively from dyspnoea, which is much worse when he already labours under emphysema, or any other disease of the respiratory organs, which of itself occasions a difficulty of breathing. The treatment of this affection varies according to the condition of the individual attacked by it, and the form of the disease which it assumes.

If the patient be robust, and you are called early, you will find it advantageous to resort to pretty free depletion from the arm. Great caution, however, is necessary in the use of this remedy after the disease has advanced to a certain point. When secretion has taken place, and the patient is reduced in flesh and strength, the bleeding often causes dyspnoea by preventing free expectoration. Vegetable emetics, in small doses, and expectorants, especially those of a stimulating nature, are the most valuable remedies in these cases; and in this disease you will again find that the senega is one of the best expectorants of this nature. If the patient be weak and debilitated, some carbonate of ammonia must be added to it; but the balsam of copaiba does not answer so well in this variety. If I were to select the diseases in which carbonate of ammonia is decidedly useful, I should place the bronchitis of old men and feeble subjects at the head of the list. The ammonia keeps up the strength of the patient, and promotes the natural process of cure; that is, evacuation from the bronchial mucous membrane. It therefore acts directly upon the affected part; blisters and sinapisms exercise a much more indirect influence upon it, and do good rather as revulsives in removing the inflammation, and as stimulants to the nervous system, than as direct curative agents.

In some cases of bronchitis there is a viscid secretion, with deposit of lymph, which causes great dyspnoea on account of the formation of a membrane in the tubes; sometimes this membrane has a tubular form, and these tubes have been ridiculously termed bronchial polypi. This formation I have observed more frequently in old persons than in children. It causes dyspnoea by protecting the mucous membrane of the tubes from the contact of the air, and by obstructing the passage into the air-cells. The lymph is detected by its presence in the expectoration, as well as by the orthopnoea. Emetics and expectorants, as those of a nauseant or stimulant kind, are appropriate to this disease, according as inflammation is present or not; but mercurials, which are the most efficient of all known medicines in preventing the formation of lymph, are sometimes required, if the affection be highly inflammatory.

Although acute bronchitis is in many cases an idiopathic affection, it also occurs frequently as a complication of other diseases.

Almost no acute disease attended with fever is entirely exempt from it; and, as a general rule, the degree of fever is proportioned to the frequency and severity of the secondary bronchitis. It is thus an almost invariable attendant upon measles, typhoid fever, and in fact many of the exanthematous diseases. The secondary inflammation is most frequent at the same season of the year as the primary bronchitis; that is, in the early spring, and in the winter months, when febrile diseases are peculiarly liable to this complication. There are also many chronic diseases which singularly favour the development of acute bronchitis; these are diseases of the heart and of the lungs. I have already alluded to the connection of this disease with tubercles: this is the variety most difficult of recognition, but scarcely more frequent than the acute bronchitis which occurs during the course of the chronic variety, or in emphysema. In these cases the distress and difficulty of respiration are much greater than in the simple form of the disease.

The treatment of this variety of the disease is similar to that of the acute idiopathic bronchitis, and consists in the use of depletion, stimulants, expectorants, and diaphoretics. After the secretion from the mucous membrane has set in, local depletion may be used according to the necessity of the case. Cups are more beneficial than leeches, as they produce greater irritation with a smaller abstraction of blood; they are generally applied between the scapulae. Stimulants applied externally often produce a good effect; sinapisms and other remedies of this kind are usually placed upon the anterior portion of the thorax. They act as counter-irritants.

#### CHRONIC BRONCHITIS.

I have still to speak of the chronic and specific varieties of bronchitis, and shall commence with the chronic.

Chronic inflammation of the serous and mucous membranes may originate in two ways: 1st, it may be chronic from its commencement; 2dly, it may follow acute inflammation, which frequently passes into the chronic form. The latter is the more common in the case of bronchitis.

Chronic bronchitis presents several varieties: *the common chronic mucous catarrh; chronic catarrh, with a thin, glairy secretion; and the dry catarrh, with thickening of the bronchial mu-*



cous membrane. There is another form described by some authors, viz. the *pituitary*; but this is very rarely met with so strongly characterized as to be distinguished from the second variety, or chronic catarrh with a glairy secretion, and therefore it may be considered as a mere modification of it.

The first variety, or the common mucous catarrh, is the most common. It is characterized by a secretion of white mucus, sometimes puriform, generally in irregular shreds, and but rarely moulded to the form of the tubes. It consists of mucus rendered albuminous or purulent in the progress of the inflammation. The febrile excitement in this affection is various, being sometimes very decided, but in a majority of cases comparatively mild. It is usually greater at night than during the day. The appetite, and other constitutional symptoms, vary very much.

The diagnosis is based upon the presence of certain physical and functional symptoms, and the absence of other physical signs which are found in analogous affections of the chest. The positive signs are, in the first place, the rhonchi; these are of the moist variety, and vary very much, the subcrepitant being heard at one time, and the coarse mucous rhonchus at another. The respiration is sometimes loud and rough, at others feeble; the latter state is much more common. These are the positive signs. Our diagnosis is rendered certain by the absence of signs which other diseases of the chest always present. Thus, it is distinguished from phthisis by the absence of flatness at the summit of the lungs, (which we almost always find in this affection,) and of the bronchial or cavernous respiration. Although these signs are absent in the commencement of the affection, we not unfrequently find them supervene after it has continued a certain time, as chronic bronchitis is often a precursor of phthisis. This change in the condition of the lungs is shown by constitutional as well as local signs. An increase of febrile excitement takes place, and the patient becomes more emaciated. Emaciation sometimes occurs without the super-vention of phthisis, from the alimentary canal being involved, and from the febrile excitement; but this is of rare occurrence, and we scarcely ever meet in our practice with cases in which the diagnosis is rendered obscure on this account. After the tuberculous disease

has taken place, it is exceedingly rare that the patient recovers. Sometimes the change that is about to take place seems to be indicated by the constitutional signs before the development of tubercles has occurred, by the febrile excitement, by the other symptoms being decidedly increased, and by a change in the complexion and countenance. This is a time when a correct diagnosis is of very great importance, as a proper plan of treatment may retard or prevent the development of a disease which is almost always fatal.

*Treatment.*—The treatment of this form of chronic bronchitis is somewhat similar to that pursued in the acute. General blood-letting is not often indicated; but the abstraction of small quantities of blood, by means of cups, often repeated, produces very good results; the cups are usually applied in the axilla, between the scapulæ and under the clavicles. If the disease at any time assumes a more acute form, general bleeding comes in very well. Leeches are sometimes used, but cups are preferable on several accounts; they produce a greater degree of irritation, without so great a loss of blood, and are cheaper and more convenient. Counter-irritants to the chest are very good adjuvants. These are numerous, and various in the degree of irritation they produce. I prefer the milder ones, such as Burgundy pitch, croton oil, &c., which being applied over a large surface produce, I think, a much better effect than blisters and tartarized antimony, which must be limited to a comparatively small portion of the chest. Liniments of a stimulating character have been much recommended; these consist of ammoniacal and terebinthinate mixtures. The noted empiric St. John Long was in the habit of treating thoracic diseases solely by applications of this character. Flannel worn next to the skin, and woolen stockings to the feet, are essential as adjuvants.

As internal remedies the stimulant expectorants should be used, except in those cases in which the disease approaches the acute form, when the antiphlogistic and sedative medicines are much more effectual. These are ipecacuanha, tartarized antimony, &c. Of these I prefer the ipecacuanha, as it is much milder in its action, and more easily borne than tartar emetic, which, after it has been employed for a few days, is apt to affect the mucous membrane of the stomach and intestines. In the more chro-

nic cases the balsamic expectorants are employed with great advantage. Of these the balsam of copaiba is the most efficient, but it is a very disagreeable remedy, and cannot be taken by persons who are at all dyspeptic. Your success in the employment of this remedy with patients of this class depends very much upon your mode of administering it. The following formula is a very good one:

R. Balsam Copaibæ                    ʒj. vel ʒij.  
       Tinct. Cardamom. Comp. ʒj.  
       Gum. Acac.                        q. s.  
       Aq. Menth.                        ʒvss.  
       M.

You should commence with half a drachm of the balsam in 24 hours, which quantity is to be gradually increased up to one or two drachms in the same period. If it produces much purging after administering it for some days, its use must be stopped, as this is an evidence that it has made an impression on the system. This remedy is only to be resorted to when others have proved ineffectual, as it is exceedingly disagreeable to the patient. There are other remedies of a milder nature, which can be taken with more facility; they are generally given in the form of syrups or lozenges. Most persons prefer the former, as they have been accustomed to the use of cough mixtures, which are generally in the form of syrup. Syrup of seneka is one of the best in the very chronic cases; syrup of ipecacuanha is also frequently used, and many prefer a combination of the two, which answers a very good purpose. I often use a combination of seneka and *Prunus Virginiana*, or seneka and *sanguinaria*, but more frequently the former. The following formula is one which I generally prescribe:

R. Senegæ.                    }  $\overline{aa}$  ʒss.  
       Prun. Virgin. }  
       Aq. Bullient. Oj. M.

Macera per horas xij., dein cola et adde saccharum album, q. s.

This quantity may be taken in two days, and in the management of the disease is a most effectual remedy.

Gum ammoniac is a remedy much used by some physicians, and in its action nearly resembles the balsam of copaiba. Assafœtida is also an excellent expectorant, but its taste is objectionable to many adults; it may be given in the form of lac assafœtida. For children it is peculiarly adapted.

Opium, as a remedy in bronchitis, has many advocates, and it is certainly very beneficial in some cases; but I am very cautious as regards its employment in those affections for the relief of which a secretion is necessary. I only use it as a means of procuring sleep when the cough is troublesome at night, especially when there is much irritation about the trachea and larynx.

If you prefer the form of lozenges, one of the best prescriptions will be that of the balsam of *Tolu*, which may be made into lozenges, each containing a grain of ipecacuanha, to which a small portion of morphine may be added if necessary.

The next point in the treatment is the hygienic condition under which the patient should be placed. And here the question occurs, should the patient be confined to the house or not? I would not, as a general rule, enjoin this upon him; but where there is a certain degree of acuteness in the symptoms, I think it necessary. In other cases he would lose much by keeping within doors in mild and pleasant weather, although during the cool, damp weather which is common in the spring, he should by no means expose himself. You should therefore direct your patient to take gentle exercise in the open air in good weather, unless he should find it to disagree with him.

A sea voyage to a warmer climate will often remove a bronchitis of long-standing; but it is often very inconvenient for the patient, and in many cases it is not in his power to try it. In proportion as the disease becomes more and more chronic, the patient may increase the amount of exercise, and endeavour to stimulate the muscles and exterior, and thus produce a general but mild revulsion from the interior organs. This treatment is not only of great service in removing the bronchitis, but it is the best means of obviating the danger of pulmonary phthisis. The rules as to clothing and warmth are obvious enough: the great secret of the treatment consists in diffusing the action and nutrition throughout the muscular and tegumentary tissues, and thus giving to the bronchial mucous membrane an opportunity of regaining its normal condition. The medicinal treatment is more complex; but if you separate it from the hygienic management, you will find it less efficacious than the latter.

The second variety of chronic bronchitis resembles the *pituitary* catarrh of Laennec. It



is distinguished from the preceding by several peculiarities. It does not usually follow the acute affection, but commences with its peculiar characteristics. It generally occurs at irregular periods; but in many individuals it takes place at regular seasons; in this climate usually at the close of the summer, about the month of August. It is quite frequent too in Great Britain.

The local signs of this affection consist of the various rhonchi, both dry and moist, the latter being found usually at the lower part of the chest, the former in the upper portion; there is, however, a predominance of the moist rhonchi over the dry, and of the sibilant and subcrepitant over the coarser varieties, as the smaller tubes are more affected than the larger. Sometimes all the rhonchi are heard at once, and produce a singular confusion of sounds, to which Laennec has applied the term *cantus omnium avium*. In some cases the air-cells are dilated, which renders the respiration feeble, and gives rise to much dyspnœa, resembling asthma, and indeed it may be set down as one of the varieties of this disease. The dyspnœa complicating the affection, however, more frequently arises from thickening of the tubes preventing the passage of the air into the vesicles. These attacks of dyspnœa are sometimes permanent, sometimes transitory. The fever attending this variety of bronchitis is very slight, and there is very little emaciation.

When this disorder assumes a periodical character, and occurs at a particular period, it lasts several weeks, and in general cannot be cut short by treatment. The duration of this variety of the disease is less than that which occurs at irregular intervals, and it resembles in many respects the more ordinary forms of acute catarrh, but is much more intractable.

*Treatment.*—Bleeding in a majority of cases is not well borne; but when the symptoms are acute, it may be prescribed with advantage. The remedies to be used are those which are calculated to relieve the dyspnœa. These are principally the nauseating expectorants, of which I think lobelia to be decidedly the best, so given as to produce slight nausea; it thus favours secretion and expectoration. Balsam of copaiba is also a very good remedy; but the same objections apply here as in the other forms of bronchitis. Venetian turpentine has been very much used, and is an excellent remedy.

In the periodical form of the affection, after the paroxysm has commenced, no treatment has yet succeeded in cutting it short. There is, however, one point which demands our attention, viz. the prevention of the occurrence of the paroxysm. In one case for which I prescribed cold affusions and the exhibition of quinine, previously to the attack, the disease appeared much later than usual, was milder in its character, and its duration was much less.

*Dry Catarrh.*—The third variety is perhaps as frequent as either of the others, and is by a strange contradiction in terms called *dry catarrh*, because there is little or no expectoration, differing in this respect from the other varieties. The prominent lesion in this form of bronchitis is a thickening of the mucous membrane. This, though rendered evident by the local signs, is not always found after death: in this respect it is analogous to other congestions of membranes. It is attended with very little febrile excitement; and the functions of the alimentary canal are but slightly, if at all impaired. The cough is short and dry, thus differing from the cough which attends the other varieties, the latter being loose. The chest is sonorous throughout, and in some cases preternaturally so, on account of the emphysema, which is a frequent attendant. The respiration is generally feeble, and sometimes a rough rustling sound is heard, arising from the friction of the air-cells against the pleura. The dry rhonchi are usually heard, though not in all cases, as the thickening must proceed to a certain point in order to produce them; they, of course, vary according to the particular part of the bronchial tube which is affected. But, it generally occurs that the sibilant rhonchus is chiefly confined to the anterior part of the chest, and the sonorous rhonchus to the neighbourhood of the larger tubes. Besides emphysema, there is another complication which is frequently met with, and which, like it, is produced by the violent efforts made in coughing,—I allude to hypertrophy and dilatation of the heart. These three affections frequently coincide; and the heart disease, the dry catarrh, and emphysema, form a triple lesion. The duration of this variety of chronic bronchitis is greater than that of the other two. It continues to an indefinite period,—the patient often labouring under it for several years, unless some acute affection of the lungs should supervene, which is then rendered

more grave by the previous existence of the dry catarrh. When, for instance, pneumonia attacks a person who is affected with dry catarrh, the dyspnœa which, under ordinary circumstances, attends the acute affection, is rendered more severe by the existence of the chronic: this, of course, renders our prognosis much more unfavourable than it is when the disease is not complicated with an acute inflammation, or when the dyspnœa is not severe.

*Treatment.*—Very little advantage results, I think, from the employment of medicines in this variety of chronic bronchitis. It is, however, of importance to attend to the hygienic condition of the patient. His clothing should be warm, and his chest and extremities protected by flannel; and he should not expose himself in damp and inclement weather, while he should take exercise when the weather is dry and pleasant. The patient, however, sometimes insists upon having medicine, and it is as well to gratify him in this respect. The balsams and turpentine have been much used; also alkalies, which are highly recommended by Laennec.

I have not spoken of the use of mercurials in the treatment of chronic bronchitis. They have been used from time to time; but the results have not been such as, in my mind, to warrant their employment.

There is an affection which resembles very much the dry catarrh, that is, the cough which occurs in some cases of dyspepsia; it is usually dry, and sometimes attended with rhonchi, although in general they are not heard. The diagnosis here depends upon our knowledge of the previous affection of the stomach. In other cases, however, a bronchitis, previously existing, is aggravated by the occurrence of an affection of the stomach: here the priority of symptoms must be your guide. We can generally succeed in arresting this cough by the use of tonics, alkalies, and other remedies adapted to the state of the stomach.

Chronic bronchitis may arise from a variety of causes, as a fever, an acute attack of disease of the lungs, &c. It is frequently found co-existing with tuberculous phthisis, which may either have preceded or followed it; and it may follow any other disease of the lungs, or it may be the cause of such affection. Indeed, we seldom meet with a disease of the parenchyma of the lungs

unaccompanied by bronchitis, which we might naturally suppose would be the case, since the bronchial tubes constitute so large a portion of the respiratory organs. The disease receives the name of *bronchitis* when the affection is confined to the tubes; when the parenchyma is attacked, the bronchitis is looked upon as a mere complication of the more serious affections, and the designation of the disease accords with the principal lesion. This rule should be adhered to, otherwise you will confound together many different affections, and may include phthisis, laryngitis, and pneumonia, under the common designation of bronchitis.

#### PECULIAR VARIETIES.

Besides the modifications of bronchitis which depend upon the duration of the disease, and the age or other peculiarities of the individual, there are other varieties which are specific in their character, and depend upon a peculiar condition of the system, produced by a constitutional disorder. Of these varieties one of the most frequent is *pertussis*, or *whooping cough*. This is an affection of the nervous system accompanied by bronchitis, in which sometimes the one, sometimes the other predominates; the affection of the nervous system being in some cases very severe, with but little cough, whereas the cough is frequently very bad, with comparatively slight nervous symptoms. We almost always meet with this disease in children, though adults are occasionally attacked by it. It is a self-limited disease, and therefore cannot be cut short by treatment, although its complications may be removed or palliated. Though the inflammation of the bronchial tubes is merely the local part of the disease, yet it is in one sense the most important, for patients generally die of the bronchitis and its immediate effects. The secretion from the mucous membrane is much greater than in ordinary varieties of bronchitis; and in children it tends constantly to accumulate in the inferior parts of the tubes: they are in this way gradually enlarged until permanent dilatation results. The thickening and congestion of the mucous membrane do not differ from the same alterations in ordinary bronchitis. When a fatal termination occurs, it generally arises from the feebleness of the patient, and a consequent inability to expectorate, or as is the case with children, to discharge the secretions by vomiting.

The parenchyma of the lungs may become con-



gested and inflamed, producing a pneumonia which may prove fatal.

The principal sign of this disease is the peculiar whooping character of the inspiration: this is caused by the forcible expulsion of air from the chest, in fits of coughing, and sometimes occurs in other forms of bronchitis, which, however, do not often possess the paroxysmal character of pertussis. In addition to the cough we meet with the rhonchi, both dry and moist, and very often with a gurgling caused by the collection of fluid in the dilated bronchi. The cough usually lasts for several weeks; it then declines gradually, and the rhonchi disappear. It is gradual in its attack, being at first slight, and then becoming violent. It comes on in paroxysms, of which, in mild cases, there are usually five or six during the day, the patient being free from cough in the interval. In severe cases the number of paroxysms is much greater. They sometimes occur as often as once an hour, and occasionally there is only an interval of a few minutes. In such cases the patient generally dies of exhaustion. The secretion in the bronchial tubes consists of thick, glairy mucus; when it has continued for a long time, it sometimes contains a small portion of pus, intermixed with blood. Sometimes blood is effused, and a partial hæmoptysis occurs. The secretion is usually thrown off by vomiting, especially in young children, who cannot expectorate. The appearance of the face in this disease is peculiar, being of a bluish colour, accompanied by puffing of the eyelids. This is the effect of the violent efforts made in coughing, and the congestion consequent upon them. It is in some degree a measure of the severity of the affection.

When fever occurs it indicates the existence of inflammation of the lungs, and when high, is a symptom of much gravity. When the development of tubercles takes place towards the close of the disease, the fever continues with a quick, irritable pulse. It is usually the miliary form of tubercles which occurs under these circumstances, and is almost always fatal.

The *diagnosis* is pretty clear after the second week: the paroxysmal character of the cough, with its whooping inspiration, its complete intermission, and the recurrence of the paroxysm during any disturbance of the mind, are sufficient to characterize it.

The *prognosis* is generally favourable in the simple forms of the disease, but becomes less so in proportion to the severity of the complications.

*Treatment.*—As the disease cannot, as a general rule, be arrested, we should palliate its symptoms, and assist nature in the means which she has pointed out for its relief, we should therefore promote the secretion in the tubes, and favour its removal. Therefore we should employ mild emetics, which tend to bring about both these ends. They should be given once or twice a day for a week or two. In this affection there is always a disposition to vomit; and as this action, brought on by artificial means, is milder than when it occurs spontaneously, emetics afford very great relief. After this treatment has been continued for the time above specified, we should make use of remedies whose action is slower but analogous to that of emetics, for this is the means pointed out by nature for the cure of the disease; and it is a maxim in therapeutics, that when a secretion is intended by nature to remove any diseased state of the economy, we should favour or moderate it, and not arrest it. Ipecacuanha, in the usual expectorant doses, may be used for this purpose, and answers very well,—but one of the best remedies in this affection is assa-fœtida, as it favours expectoration, and also controls the disorder of the nervous system, which constitutes so large a part of the disease. It may be given to children of eight or ten years, in doses of two or three grains, several times daily. However, it cannot always be given internally, as it is so repulsive to the senses; applied externally, in the form of a plaster, it acts very well, producing an impression on the nervous system, and moderating the paroxysms. Ammoniac, galbanum, &c., are used in the same manner. Revulsives to the chest are useful, but not always necessary; when required, I prefer sinapisms to blisters or moxas. There is another remedy which is much more powerful than these,—that is, the extract of belladonna; I know of no practitioner who uses it more boldly, or with better effect, than Dr. H. Corson, who resides not far from this city. I regret that I have not his formula at present. Still, you cannot be too cautious in the administration of this medicine, which is certainly always attended with some risk. The

success which attends its administration in whooping cough, is stated to be greater than that of any other remedy.

The clothing should be warm, flannel to the chest, &c.

The complications are various affections of the lungs, which are, when very acute, to be treated by general and local blood-letting, and other remedies required in the affections occurring idiopathically. Phthisis occurs as a sequela of this disease, and does not require medication; it is best treated by a change of air, which is advantageous in the declining stages of all severe cases of pertussis.

As pertussis rarely occurs with adults, we are apt to make an incorrect diagnosis when it does thus occur: this should be borne in mind, as we might confound it with a variety of bronchitis resembling pertussis, which is exceedingly difficult to get rid of. Ordinary bronchitis may be complicated with the nervous spasm; but the disease should not be confounded with pertussis, unless the spasms are disproportioned to the bronchial affection. This constitutes the peculiarity of the disease, and gives to it that mysterious difference between it and other varieties of bronchial inflammation.

#### BRONCHITIS DEPENDENT UPON A CONSTITUTIONAL TAIN.

There are certain cases of bronchitis which depend on a particular diathesis, or a peculiar condition of the system induced by a specific affection: to this class belong the syphilitic and scrofulous bronchitis. But you will sometimes find that the syphilitic variety is singularly similar to phthisis in the emaciation and other constitutional symptoms; so much so that the deterioration of the health is such as to end in phthisis. The scrofulous bronchitis is attended with a very abundant secretion of a thick, glairy mucus, and is in most cases complicated with an inflammation of the upper portion of the respiratory tubes, so that the nasal cavities are sometimes more affected than the bronchi; it must be treated with remedies calculated to correct the morbid state of the system, such as mercury, iodine, sarsaparilla, for the syphilitic variety; iodine, iodide of iron, and other chalybeates, may be used in scrofulous disease, besides resorting to local remedies.

*General Remarks.*—Although bronchitis, as a disease, presents many varied characters, yet

there are certain features which are common to every form of it. In all, the turgescence of the bronchial mucous membrane with blood gives rise to the chief difficulties in the respiration, and, when this congestion extends to the smaller tubes, the dyspnoea becomes excessive, and may be a source of immediate danger. This simple congestion of the membrane occurs in the early period of acute cases, and in the dry catarrh it becomes a chronic condition, and lasts for an indefinite period. The most easy and frequent termination of the congestion is by direct secretion from the bronchial tubes; that is, by the formation of a mucous and mucopurulent discharge; but in many cases the general circulation may be restored, and the congestion removed, by the free discharge from the capillaries of the skin, or some other tissue. If this relief does not follow, the tendency of all cases of dry bronchitis is to congest the heart, and to distend the vesicles of the lung; hence emphysema of the lungs, and dilatation the heart, frequently depends upon this cause.

The other varieties of bronchitis, whether acute or chronic, are those in which secretion takes place; if this secretion be of a natural, healthy kind, the inflammation ceases; thus the thin albuminous secretions are replaced by a more consistent mucous or mucopurulent expectoration, which again gradually passes into a more transparent mucous discharge, which gradually ceases. But, although this is the course of the disease when it terminates favourably, in many cases the secretion of mucous and mucopurulent matter will continue, while the inflammation does not abate. These are the chronic cases of mucous catarrh. In this variety the discharge is analogous to what takes place in chronic dysentery, when the inflammation is not relieved by the secretion. The difference appears to arise from a modification in the mucous tissue, by which the vessels remain permanently enlarged, and recover with difficulty, unless a stimulant is administered which should excite this new action. Hence we use what are called the stimulating expectorants so largely in these forms of bronchitis; these remedies supply the excitement necessary to the relief of the disease by a new and more healthful secretion. The inhalation of the vapour of water, of tar, ether, &c., act much in the same way, but are more direct stimulants of the membrane. The depleting re-



medies, which are often necessary in severe bronchitis, act, of course, very differently from the stimulating expectorants; they merely equalize the circulation of the bronchial vessels, and thus lead towards health by removing the vascular excitement which keeps up the disease. The results of this mode of treatment will, of course, be essentially the same with those derived from the stimulating expectorants, but the *modus operandi* is totally different. The revulsive means are more analogous to the direct antiphlogistic remedies, and produce very nearly the same effects.

Bronchitis is therefore a multiform disease and varies both in symptoms and treatment with almost every modification of the body; it may be highly inflammatory, and require the most vigorous depletory means, or it may degenerate into a mere chronic oozing of mucus from the vessels. The object of the physician is to vary his treatment according to these different conditions, and, at one time, to resort to vigorous antiphlogistic measures, and, at another, to a course of treatment which is totally different. I have laid much stress upon the latter practice, because it is suited to a greater number of cases, but I am not the less convinced that in the cases which are decidedly inflammatory, the most effectual relief is produced by the antiphlogistic practice; it may afterwards be followed by any other remedies that the case may seem to require.

## FOREIGN.

### FERRALL'S CLINICAL LECTURE. No. II.

*Gastritis, subacute, a frequent complication of other diseases—Cases of subacute gastritis treated by depletion and diet—Kreosote in obstinate vomiting—Two forms of organic disease of the pylorus, generally distinguishable during life—Stricture of the pylorus without cancer—Cancer of the pylorus without stricture—Diagnosis.*

GENTLEMEN,—In the selection of cases for your instruction, I have thought it expedient to bring under your notice what is useful, rather than what is rare, in practice; convinced, as I am, that many pupils quit their studies with their note-books filled with medical rarities, while they are ill prepared by observation for the ordinary duties of their profession. I shall, therefore, occasionally mingle such inquiries with the more serious objects of our researches.

There is an affection of such common occurrence that you can have no pretensions to the rank of a well-informed practitioner without being perfectly familiar with its symptoms and treatment. You may term it subacute gastritis, gastric irritation, or acute dyspepsia, in accordance with different authors; but it is little matter by which denomination you express it, provided you are prepared to recognise its approach, and are competent to its management. It may arise in the course of some surgical disease, or subsequent to an injury. It may complicate a fever, of whatever origin, or (it is in vain to deny it) it may spring up in consequence of the treatment employed to subdue a pneumonia, or some other acute disease. Under any of those circumstances, to overlook gastric disturbance of an urgent character would be to compromise the safety of your patient. You cannot, therefore, bestow too much pains on the study of this important subject.

Three cases of gastric irritation, or subacute gastritis, have been discharged this week, and two post-mortem inspections have been made in cases which were admitted in a hopeless state of organic disease of the stomach. The two latter are instructive specimens of the two varieties of organic lesions of this organ, to which I have before called your attention. You witnessed the difference in their symptoms; you have now the parts before you, and can see whether my explanation of the cause of this difference is founded in reality. I have long been convinced that many cases were termed cancer of the stomach which really had not the essential characters of that malignant disease; and I believe that, in many instances, the phenomena displayed during life were sufficiently distinctive of those affections. The two cases to which I allude have been now under your observation for some time, and you are consequently prepared to follow me in their analysis.

We shall first briefly dispose of the cases of gastric irritation.

*Vomiting—Epigastric tenderness—Loss of flesh—Cure by depletion and low diet.*

Eliza Higginson, æt. 20, was admitted December 5th, complaining of severe pain at the pit of the stomach, loss of appetite, chilliness, and occasional burning heat. She frequently vomits her food, which returns with a remarkably sour flavour. She is thirsty. Her flesh and strength are greatly reduced; skin hot; pulse 90; tongue slightly coated in the centre, with florid tip and edges. The bowels are confined; urine scanty, and high coloured and acid. Epigastrium tender and tumid. She is impressed with the notion that her complaint is all weakness, and has taken ale and porter every day, although she now admits she suffered more in consequence. The catamenia is regular.—She has never been well since she met with an accident by coming in contact with the shaft of a car, about two months ago, but had no other ill consequence.



Cupping on the epigastrium to eight ounces. Arrow-root in small quantities. The bowels to be freed by enemata, and the following powder to be taken three times daily:

R. Sodæ Bicarbon. ʒj. ; Sacch. Alb. gr. v.  
M. pulv.

December 10th.—She has not had vomiting since her admission. Urine paler, and more copious, but still acid; bowels free; tongue improved in color.

Pergat.

20th.—Feeling herself quite well, she requested a little meat a few days ago, but suffered pain that night; on which account a small blister was applied to the epigastrium. There has been no pain since. The vomiting never occurred since she came into the hospital. Her strength is improving, although her diet is exclusively farinaceous. The skin is dry, but no feverish heat is felt now. Pulse 72. A warm bath is ordered.

24th.—Feels quite well. Discharged.

*Constant vomiting—Epigastric tenderness—Depletion—Kreosote.*

Mary Bardin, ætat. was admitted on account of constant and painful retching, great soreness and pain at the pit of the stomach, and excessive exhaustion. She had been an out-patient for bronchitis. The liquor antimon. tartar, in half-drachm doses, had succeeded in removing the pectoral affection, but the stomach became disordered. She discontinued her attendance at this time, believing that the stomach would improve when she took more liberal diet. This only aggravated the evil; and, after ten days of suffering from vomiting, which gradually increased until even cold water was rejected, she begged to be admitted into the hospital.

The epigastrium was tender; the tongue coated; and, at the tip, studded with red points.—Pulse feeble and small. Skin hot and dry.—Countenance haggard, and expressive of pain. Bowels easily moved, and without pain. Urine scanty.

A sinapism was laid on the epigastrium, and she was directed to take a scruple of aqua lauroceras three times a-day.

The next day the report states that the vomiting is less frequent, but continues still; there is more reaction, and the pulse is more voluminous. She was then cupped on the epigastrium to six ounces, which removed the pain and tenderness altogether. Cold water in sips remained on her stomach, but every thing else was rejected. A drop of kreosote, with mucilage and water, was administered every fourth hour with the best effects; the retching ceased, and arrow-root and boiled bread-and-milk were retained. From this time she improved rapidly. The renal secretion increased under simple treatment, as effervescing mixture, and she was dismissed free from complaint on the eleventh day from her admission.

*Chronic gastritis—Epigastric tenderness—Depletion—Cure.*

Anne Dunne, ætat. 38, had repeatedly suffered from pain in her stomach, with vomiting of sour fluid. On more than one occasion she has attended as an out-patient, and received complete relief from antacids, milk aperients, and counter-irritation of different kinds. Within the last three months she has been losing flesh, and has suffered so much after meat or stimulating diet, that she has given them up altogether. Her countenance is not sallow, though her face is thin. Her tongue is rather clean, but too red at the edge. Pulse 80. Bowels confined. Urine in natural quantity, but depositing deep-coloured lithates. She suffers greatly from flatulence; and has been induced to take stimulants, as peppermint, on account of the immediate relief which follows their use. She has constant thirst, and desire for cold drinks. Catamenia regular. No pectoral disease.

This patient had learned from experience to manage her own diet; and the only error she committed was in the use of stimulants, and in postponing her application for proper aid. She was ordered to remain in bed, was cupped on the epigastrium, and had equal parts of aqua calcis and warm new milk three times a-day. The bowels freed by enemata.

Four days afterwards the report states that the flatulence is very much diminished, and she bears pressure better on the epigastrium. No tumor or circumscribed hardness was to be discovered in that region. The bowels were acted on by emollient enemata, which she found to diffuse a sensation of comfort through the abdomen and stomach.

As the case had now become chronic, and as frequent attacks had succeeded each other for a period of two years, it was deemed advisable to establish a permanent counter-irritation over the epigastric region. For this purpose two moxæ were applied. The pain of this application being of very short duration, is better borne than that from caustics of other kinds.

In a fortnight this poor woman was so far recovered as to desire to return home. The issue was established over the former seat of pain.—Soda was occasionally given in lieu of the aqua calcis, but was always discontinued when the urine showed a neutral or alkaline reaction. Her tongue became pale and moist. She lost the thirst, and was now able to take a little chicken with impunity.

In the latter case, considering the period of life, the frequent recurrence of attacks, and the loss of flesh, there is reason to apprehend that if she relaxes in her attention to diet, or neglects the earliest intimations of irritation, organic disease of the stomach will ensue. We frequently see persons go on for years, occasionally suffering from gastric irritation, and at other times quite free from complaint; until, at length, the



attacks settle into disease of an incurable nature. An instance of this kind will occupy us presently, in the case of poor O'Shaughnessy, who died a day or two ago.

The first case, Higginson, showed the advantage of decided treatment, and of depletion whenever the epigastrium is tender permanently.—By this I mean, when the tenderness is not the sequela of an attack of gastrodynia, or spasm, or the soreness which remains after violent vomiting, and which latter often resides in the abdominal muscles. You should not omit depletion by cupping or leeches whenever there is evidence of hyperæmia of the organ, suggested by the florid tongue, thirst, hot skin, local heat over the stomach, and deep-seated tenderness on pressure. This being premised, your other remedies will produce a better effect. The state of the renal secretion will often assist your other diagnosis, although you must not forget that copious fluid vomiting will render this secretion scanty.

The second case, Bardin, evinces the efficacy of kreosote in obstinate vomiting. The advantages of this remedy were first insisted on by Dr. Elliotson, and have since been acknowledged by Dr. Burne, of the Westminster Hospital, who has employed it in irritation both of the stomach and bowels with success.

Of the two forms of organic disease of the pylorus to which I alluded, and which are preceded or accompanied by symptoms of chronic gastritis, one consists in hypertrophy of the tissues entering into this portion of the organ, and appears to destroy the sufferers by increasing constriction of the orifice, impeding the passage of the aliment, and literally starving them to death. The other presents the characters of an essentially malignant change—involves other organs generally—and frequently ends in the dissolution of the patient, without any mechanical obstruction in the part.

*Stricture of the pylorus without cancer—Death from inanition.*

Mary Cousins, æt. 39, stated on admission that she had been labouring for six months under her present complaints. They commenced by a sudden attack of vomiting without any evident cause. She had pain in the stomach, but does not describe it as having been severe. This acute attack gradually subsided without treatment, but left a disinclination for food, and pain after eating. The vomiting, which during the acute invasion brought up everything, solid and fluid, immediately it was swallowed, was then much less frequent, and only followed the ingestion of animal or stimulating food, and she began to think herself well. But latterly, milder food returns, and she suffers pain after every meal. She is remarkably emaciated, and describes the change in this respect as being very great within the last month; her features are drawn and lengthened; the nose is blue, as if from cold; the lips pale; tongue

slightly coated, with red edges; pulse small, 100; skin dry; bowels obstinately constipated: she says three weeks elapse between the evacuations. On examination, a hard tumor, about the size of a small apple, is found to the right of the umbilicus; there is tympanitic distension, especially of the left side of the abdomen; very little pain on pressure.

This was the report of her state on admission. Several days elapsed before the bowels yielded to enemata, and then a very large feculent discharge took place; a dose of aqua lauro-ceras, before her slight meal of arrow-root, seemed to cause it to be retained, but we found on inquiry that the vomiting was only postponed. She did not vomit after every meal as heretofore, but it gave her pain; and now an attack of vomiting was observed to occur regularly at 5 o'clock every morning. On inspection, the quantity ejected was found to exceed greatly what had been ingested; it consisted of a brown fluid, like chocolate, mixed with mucus and some traces of the food; the bowels remained confined, and acted not more than once a week; the urine brown and scanty; the tongue generally dry. The saliva sometimes yielded an acid reaction, but nothing satisfactory could be said on this point, from the variable nature of the results. She suffered from thirst, but dreaded swallowing on account of a peculiar distress which followed it: together with the pain, a remarkable sensation of regurgitation immediately commenced (and could be felt by the hand laid on the abdomen) at the seat of the hard tumor; from this point it ascended towards the cardiac orifice, and thence returned again. Nothing could exceed the dread she felt of exciting this painful state.

I need not remind you of the various remedies employed to soothe her sufferings. Preparations of hydrocyanic acid, bismuth, kreosote with opium, belladonna externally and internally, &c. &c.; all of these produced relief for a time, but I think she derived more frequent comfort from kino and acetate of morphia. This copious secretion of the mucus, as well as the flatulent distension of the stomach, appeared to be in some measure diminished by this plan. The chocolate-coloured vomiting, however, persisted, and was only occasionally controlled by the exhibition of the tincture of the muriate of iron.

With a view to sustain this poor woman, enemata containing strong broths, milk, and arrow-root, were tried, and seemed for a while to revive her; at length she began to sink more decidedly, her voice became husky and reduced to a whisper; her pulse scarcely palpable; her tongue icy cold; the surface, generally, cold and bluish, and reminding us of the collapse of cholera; the evacuations by the bowels more rare; occasional hiccup. She lay for several days in a torpid state, sleeping with the lids half closed, and scarcely living. The vomiting occurred regularly until she was released from her sufferings.



*Autopsy.*—Remarkable congestion in the veins of all the intestines as well as of the stomach. The vessels large, and marked by a brownish dark blood. The stomach was enormously distended, and taking an unusual course. The whole left half of the abdomen was occupied by this organ, which descended directly into the left iliac fossa; thence it ascended towards the umbilicus, to the right of which was situated the hard tumor of the pylorus, which had been felt during life. The stomach contained a large quantity of brown fluid similar to what has been ejected; the mucous coat was tinged of the same colour; the veins large and congested.—The thickness of the stomach in its pyloric third was such as to make it resemble leather to the touch. A section of this portion, you perceive, reminds us of a thickened urinary bladder with deenerated prostate gland; the passage into the duodenum would hardly allow the passage of a probe; the contracted portion was near three-quarters of an inch long, and ascended by a curve to the duodenum.

On examining the section carefully, you perceive the tunics are all thickened, but there is no breach of surface. The mucous coat presents no trace even of abrasion. The brown chocolate fluid was then an exhalation from the surface of the membrane. You cannot dissect off the mucous membrane without the sub-mucous cellular coat. They came off together, and appear to be connected with the muscular coat by a fine cellular tissue. This is not exactly what Andral describes; for he mentions the thickened cellular tunic dipping by bands between the muscular fibres, and connecting itself with the sub-serous cellular tissue. The muscular coat, when washed, presents very much the colour and appearance of the muscle of a fish; the fibres are distinct, but hypertrophied. The thickness of the section is rather more than half an inch at the pylorus, and rather less than half an inch below that point.

The liver was dark coloured, but contained no morbid deposit. The gall bladder was very large, and filled with deep-yellow-coloured bile; the spleen of moderate size; the kidneys rather small, and of a venous colour on section, but presented no other change; pancreas healthy.

We shall now pass to the case of O'Shaughnessy, and conclude by contrasting it with the former.

*Cancer of the pylorus without stricture.*

Ellen O'Shaughnessy, æt. 40, was a patient in St. Vincent's Hospital on a former occasion, (twelve months ago). She suffered, at that time, from pain after food, tenderness below the ensiform cartilage, distressing burning sensation, and acidity. This state succeeded to a rather sudden attack of pain and vomiting, which she attributed to interruption of the menses. She never ventured to use animal food afterwards without suffering immediate pain and burning heat, and, within half an hour, reject-

ing it entire. She applied to a medical gentleman for advice in the beginning, but states that no depletion was employed. On her admission for the first time into the hospital, she had leeches applied, and blisters, and took small doses of opium, with antacids, with good effect. Her appearance improved, though not very much, and she returned home, feeling quite well, but exhibiting a sallowness of complexion which did not belong to health; farinaceous diet was advised.

She then went to attend a lady, who pressed her to use a more nourishing diet. In deference to this advice she tried wild fowl in small quantity, but soon wished to give it up, on account of returning pain. Her patroness insisted on her persevering, and assured her of success, alleging that she only wanted proper nourishment to restore her completely. The pain, however, increased; she became feverish again, lost colour and flesh rapidly, and, although the vomiting seldom occurred now, her suffering was so great, after even the mildest food, that she lost rest altogether.

In this state, after an absence of twelve months, she begged to be re-admitted into the hospital. She was now so altered in appearance, that she was not recognised at first. Her voice was feeble; her colour sallow. She was emaciated, and her countenance wore the aspect of malignant disease.

The abdomen, on examination, afforded abundant evidence of organic disease; a large tumor occupied the epigastric region, and could be traced upwards under cover of the ensiform cartilage and ribs. The whole of this region was dull on percussion, as well as the right hypochondrium; a distinct bulging prominence marked the centre of this solid mass. The abdomen was rather shrunken, and had little of a tympanitic sound. The pain she complained of extended, she said, through the bowels towards the pubic region. She had occasional diarrhoea and griping, but not constipation at any time. It was evident that extensive organic disease existed in the abdomen; the bulging prominence was considered to be a tuber of the liver: the situation of the pylorus could not be ascertained.

The principal indications, namely, to moderate the diarrhoea, and lessen the sensibility of the mucous surfaces, were attempted by cretaeous preparations, with opiates, aqua calcis, rice, flour and milk, &c., with varying success. Every remedy seemed of use at first, but soon ceased to exert any control over the symptoms. The same remedy was often resorted to again with advantage, although it had, before, ceased to procure relief. The diarrhoea was remarked to produce very fetid discharges. The renal secretion was generally scanty, and remarkably loaded with purpurates; her colour now became more jaundiced; she had occasional perspirations at night, and lost strength rapidly; she had hiccup. The pain was absent occasionally



for several days together, and certainly became much less distressing. For two or three weeks before her death she had no vomiting; but the diarrhoea became less manageable even by opiate enemata. The dejections became paler, but still very foetid. The tongue dry and brown; the pulse faltering; the hiccup more frequent. She sank in a semi-comatose state. The saliva was occasionally acid during this period.

*Autopsy.—Head.*—The vessels of the brain (the veins and sinuses) were rather turgid; no remarkable arterial vascularity. The consistence of the brain was rather firm; no sub-arachnoid or other effusion.

*Chest.*—The pleurae costalis and pulmonalis were adherent at several points of right chest; a few tubercles were found in a crude state in the apex of that lung. No disease in the left side. The heart was rather small; muscular substance softer than natural; cavities and orifices normal.

*Abdomen.*—The peritoneum was adherent in a few places, and connected the liver to the diaphragm. The liver was large, and presented a striking example of the soft tubercle. You observe the masses are circumscribed accurately, have a yellow colour, are depressed in the centre, and are marked by numerous radii formed of blood-vessels proceeding from the liver towards the centre of the morbid growth.—Their circumscription, in the substance of the liver, is complete; for you perceive they can be turned out entire, and without destroying anything but a very fine cellular tissue which surrounds them as they lie embedded in the organ; a section exhibits a yellow soft encephaloid substance, almost creamy in some parts, enclosed by septa of a firmer consistence and a whiter hue. There is no very apparent arrangement of the septa. Some of the tubera are excavated in the centre, or softened into a puriform fluid. The stomach was rather contracted; it lay concealed by the liver, and by a mass of morbid growth which surrounded the pylorus, and extended behind it towards the spine. Several globular tubera, as large as filberts, were found in this mass: their structure was similar to those in the liver. The gall-bladder was small, and contained a little dark green bile. On opening the stomach, a large sloughy excavation occupied the place of the pylorus; the surface was irregular; in some places reduced to a pulp; and in others, where sloughing had not occurred, gristly to the feel. This large ulcerous cavity was smeared with a peculiarly foetid sanies. The passage of the pylorus was open and large, and admitted two fingers to pass readily into the duodenum. A section of this mass showed a surface of cartilaginous appearance, striated, but exhibiting no trace of the tunics of the organ. The stomach exhibited little thickening beyond the seat of this cancerous disease. The mucous coat of the intestines was tumid and vascular, towards the termination of the ileum; no abrasion was disco-

vered. The spleen and kidneys presented nothing remarkable.

You will now, gentlemen, understand why I desired your special attention to the phenomena which, so very different from each other, characterize those cases during life. You will also be convinced of the value of minute anatomical analysis, post-mortem, by the clear and satisfactory explanation which, in these two cases, it affords of the symptoms you observed.

In the case of Cousins, the pylorus, though less extensively diseased, could be felt during life, because, in the first place, no other tumors existed to conceal it; and secondly, because the enormous distension of the stomach, occasioned by the permanent obstruction at its orifice, brought it lower down into the abdomen. But how are you to recognise a pyloric tumor, so far displayed inferiorly, as to be on a plane with the umbilicus, and latterly, as to be placed in the right side of the middle line? Might it not be a tumor of the omentum, or other growth connected with the intestines? If you adopt this rule, you will seldom be deceived. Percuss the proper region of the stomach, and discover its peculiar tympanitic clear sound. Then follow this sound, by progressive percussion downwards, till you lose it, and finally pass to the right, till your fingers are conducted by this sound to the spot occupied by the pyloric tumor.

It is to Andral we are indebted for precise notions of hypertrophy of the tunics of hollow organs, as distinguished from other changes of a more malignant nature. He remarks the enormous distension of the stomach, which occurs in pyloric obstruction from this cause, and records examples where the contents were rejected only every seven or eight days. He also notices the fact, that chocolate or coffee-coloured fluids may be vomited in cases which present no abrasion of the mucous surface.—The case of Cousins is well calculated to support his opinion, and shows that this kind of vomiting is not, as it was considered in Dr. Baillie's time, pathognomonic of cancer of the stomach. Dr. Baillie does not appear to have recognised this disease. He describes stricture of the pylorus as caused by "permanent contraction of its muscular fibres," and accounts for its occurrence at the pylorus, more frequently than at the cardia, by the "fibres at the pyloric end being more circular in their direction," and possessing "a stronger contractile power." He adds, "I have seen one instance of this contraction at the pylorus, which, even there, is a very rare disease." It is difficult to say whether this is meant to apply to a case of hypertrophy, or whether he may not have been deceived by the contracted state of the pylorus, which often exists at the moment of death; but which did not exist, perhaps, an hour before that period, and which is easily removed after death, by the slightest dilatation, without injury to the parts. I believe this to be possible, because



I have more than once seen a contracted state of this orifice exhibited as a disease, when the largest finger could be readily passed through it, and when the tunics, thus separated, were perfectly natural in thickness, pliability, and consistence. In the section entitled, "diseases of the pylorus," that distinguished pathologist, Dr. Ambergrombie, describes some of the prominent symptoms; but does not contemplate any distinction between the cases in which hypertrophy without cancer is to be found, and those in which the essential characters are malignant. Indeed he does not appear to have examined the parts with that minuteness which alone could have enabled him to make the distinction. He gives three cases, and in the first states merely that "the pylorus was surrounded by a mass of schirrus, the size of an orange, very firm, or nearly cartilaginous;" "the stomach in other respects was entirely healthy." In the next case, he says, "a mass of schirrus, four or five inches in diameter, surrounded the pylorus, and the pyloric orifice was so narrowed as scarcely to admit the point of a very small finger. The inner part of the mass opened upon the internal surface of the stomach by an ulcerated space, covered with large cancerous-looking tubercles. The other parts of the stomach were tolerably sound."—In the third case also, he describes the external tumor and the internal surface, or that presenting into the cavity of the stomach; but the structure of the mass is not displayed by a section, by which, and a short maceration, the true nature of the tumor can alone be determined.

Returning then to the two cases before you, you will observe that they differ from each other in anatomical characters, in localization, in their progressive changes, in the cause of death, and in certain symptoms manifested during life.

In the first case (Cousins) there is hypertrophy of the tissues, but they are distinguishable: it is as if they were placed under a lens and enlarged. In the second case the tissues are disorganised, and confounded together.

In the first case, the disease is local, and seems to rise from gastritis of long duration. In the second case, the taint is general, and other organs are involved in the malignant change.

In the first case, the disease ran its course to a fatal issue, without any breach of the mucous surface. In the second case, ulceration was probably an early change, for the opening was considerably enlarged.

In the first case, the patient died from irritation, the pyloric orifice being almost completely closed. In the second, the passage was larger than natural, and the patient sank under the disease of several organs, and the general taint.

In the first case, the patient had a peculiar, cold, pinched, and starved look; the vomiting continued up to the time of death, and the whole

ingesta were returned; and there was constipation, or, I should prefer calling it, rarity of faecal discharges, for constipation means a different state. In the second case, the aspect of the patient was that of malignant disease; the vomiting became less frequent, and ceased before death; and there was an opposite condition of the bowels, or diarrhoea\*.

I may remark that, in cases like the first, the vomiting of each meal separately may be generally prevented by suitable remedies; but you must not be deceived by this event; for the food will no less certainly return, as soon as the stomach becomes so much distended as to bear no further accumulation; and this I have remarked to occur more especially in the horizontal posture.

The state of the gall-bladder is worth a word or two of notice. It was found in the first case greatly enlarged and distended with bile. Now this appears to be connected with absence of chyme in the duodenum, and the want of the accustomed stimulants to the biliary ducts. Morgagni relates the experiment performed by Valsalva on a dog which he, cruelly enough, starved to death. The gall-bladder was unusually large, and distended with bile. The starvation in poor Cousins's case was the result of organic obstruction. The celebrated surgeon Mr. Carmichael, suggests as an explanation of the occurrence of gall-stone in the human subject, the pernicious habit of long fasting and late dinners, which so generally prevails. I have no doubt that, in many instances, gall-stones have their origin in this way; but some other cause must occasionally coincide to produce the result. In Cousins's case, for instance, there was long and painful fasting, and the gall-bladder was found distended with bile, but there was no gall-stone in that case.—*Lon. Med. Gaz.*

*Case of Extirpation of the Uterus.* By M. LUYTGAERENS of Zèle.—Josephine Vans Moussele, of a good constitution, and about 36 years of age, was, after a laborious labour, delivered of her first child in the year 1835. She enjoyed good health till about the end of the year 1837, when she began to suffer from uterine discharges, consisting of blood, or blood mixed with purulent matter, accompanied by pains and a dragging sensation caused by a tumour in the vagina.

In the month of August, 1838, she applied to a physician, who recognised the presence of a

\* Subsequent to the delivery of this lecture, a series of preparations and drawings, and cases illustrative of these two pathological states, were laid before the Pathological Society of Dublin, (see *Dub. Journal*), and later still I have had the satisfaction to observe that Dr. Addison, the distinguished Physician of Guy's Hospital, has arrived at similar results, in arranging the two classes of disease.



large fleshy polypus attached to the fundus of the uterus, and which, by its weight, had caused a complete prolapsus of that organ. The tumour projected externally, more or less, according to the position in which the patient was placed. It was about the size of the fist; largest below, and contracted above where it adhered to the uterus. At its upper end a hard circular ring was felt, apparently of the *os uteri*, between which and the tumor the finger could be pushed. From this circumstance it was believed that the uterus itself was reversed, and constituted the upper portion of the tumour. All the parts were covered with an abundant sanies, exhaling a fœtid gangrenous odour; hectic fever had already come on, and the patient was evidently sinking under the disease. Extirpation of the tumour was therefore resolved on as the only means of saving the life of the patient, and the operation was performed in the following manner.

The patient was laid on her back on the edge of the bed, the thighs well separated, and the tumour seized with a double forceps of Mauseux; the whole mass was then drawn beyond the external organs of generation, and, being held fixed in this position, was extirpated by means of a strong pair of curved scissors.—Scarcely was the first cut made, when a cavity was opened into; a circumstance which showed that the uterus was included in the section. A finger was introduced into the cavity by the incision, and directed upwards, but it was found that adhesion had taken place, which prevented it reaching the common peritoneal cavity. The operation was then finished, ligatures being applied to each artery as it was cut through.

The operation was not followed by hæmorrhage nor any other unfavourable event. The pain was easily allayed by opiate and emollient injections, and by opiates administered internally, and in ten days the cure was complete.

The third month after the operation the menstrual flux reappeared but in very small quantity; and six months after the operation she was in the enjoyment of good health; her menstruation was regular, but in very small quantity; and she was able to follow her ordinary occupation.—*Edinburgh Med. and Sur. Jour. from Annales de la Société de Médecine de Gand.*

*On the influence of the Manufactories on the developement of Children.* By M. DULPIN.—The pernicious effects which result from confining children in manufactories, both as influencing their health and growth, have been pointed out by M. Dulpin in his interesting work on this subject. One fact alone may be stated here, to show the value of statistical researches in elucidating the subject.

M. Dulpin chose ten agricultural districts and ten manufacturing districts, and in these ascertained with great care the number of men of 20 years of age who were rejected as recruits on account of deformity or general unfitness for

military service. In the agricultural districts, in order to furnish a complement of 10,000 recruits fit for military service, it was found that 4029 were rejected as infirm or deformed; whilst in the manufacturing districts, to furnish the same number of men, it was necessary to reject 9930 as infirm or deformed.

In some of the departments, however, the number of men infirm or deformed was much greater. Thus to obtain 10,000 men capable of carrying arms in the department of the Marne, 10,309 were rejected as infirm or deformed; in that of the Lower Seine, 11,990; and in that of the Eure, 14,451.

In the towns of the department of the Lower Seine, the number rejected rose much higher. Thus, to obtain 100 men sufficiently strong to carry arms, it was necessary to reject, on account of weakness or deformity, at Rouen, 170 young men of 20 years; at Elbeuf, 200; and at Belbec 500.—*Ibid., from Comptes Rendus, 13th April, 1840.*

*Calomel with Iodine and Sugar.*—This combination is employed in Riga, for the hydrocephalus of children, with marked success. The usual description is as follows:—

R. Calomel, gr. viij., Iodin. gr. j., Sacchari albi, gr. lxxx. M. ft. pulv. divid. in xvj. partes æquales.

Powdered digitalis with *pulvis gummosis* are sometimes combined with it. If the calomel is first rubbed with the iodine, and the sugar then added, the powder becomes red; but if the calomel is first mixed with the sugar, and then the iodine added, the colour is greenish; deutoioduret of mercury being formed in the first case, and the protoioduret in the second. This supposition has been pretty well confirmed by analysis. The red powder has effected the greatest number of cures. According to theory, eight grains of calomel, mixed with one of iodine, should afford, of

Protochloride of mercury (calomel,) 6.124 gr.

Deutochloride of mercury (corrosive sublimate,) 1.078 gr.

Deutoioduret of mercury, 1.798 gr.

The only difference in the result of actual analysis was, that the powder contained a trace of protoioduret of mercury, and in consequence rather more corrosive sublimate than the theory supposes.

As each powder is made, according to the above description, with half a grain of calomel and one-sixteenth of a grain of iodine, it contains, after the manipulation,

Corrosive sublimate 0.067 or about 1-16th of a grain.

Calomel 0.383 or about 2-5ths of a grain.

Red ioduret of mercury 0.112\* or about 1-9th of a grain.

*Lon. Med. Gaz. from Schmidt's Jahrbücher.*

\* By an error of the pen or the press, this is 383 in the original.—TRANSLATOR.



*Disease of the Kidney simulating Lumbar Abscess.*—At the Pathological Meeting of the Medical and Chirurgical Society, June 16th, Mr. Benjamin Phillips presented a preparation of the kidney illustrating the following case:—The patient, a man, 55 years of age, had been for many years a horse patrol; during the previous two or three years he had suffered occasionally from pain in the small of the back, which was suspected, by the surgeon in attendance, to result from disease in the kidneys; he was cupped two or three times with slight relief. When admitted into the Marylebone Infirmary the pain was still troublesome, there was little tumefaction or fluctuation, and the urine presented no remarkable change. When he had remained in the institution some weeks the disease assumed a more definite character, the pain in the loins became more severe, tumefaction and fluctuation became apparent, and lumbar abscess was suspected. It now became a question whether the tumor should be punctured, or allowed to burst; it was determined that a small puncture should be made, when a small quantity of thin, offensive, purulent fluid escaped; the puncture closed, and no constitutional irritation resulted. After some weeks a collection of fluid again took place, and made its way over the entire of the back, from the sacrum to the top of the scapula. The tumor was again punctured, and a pint and a half of the same kind of fluid, as before, removed; the puncture closed, no constitutional irritation followed, but at the expiration of ten or eleven days, there was found to be ulceration at the point where the opening had been made, from which there was a constant dripping of fluid, amounting sometimes to as much as a pint during the day. He went on in this way for nine or ten weeks, hectic coming on only during the last fourteen or fifteen days; during the whole of this period there was no remarkable change in the urine. He died from the irritation induced by the disease, which was still thought to be lumbar abscess with disease of the vertebræ.

After death, the abdomen was first laid open, and a long probe introduced into the fistulous opening in the back, just above the sacrum; the probe passed directly into the substance of the kidney, on examining which it was found to contain three or four large calculi; one of these was close to the surface of the left kidney, and had produced irritation, inflammation, and consequent suppuration in the neighbouring tissues. There was slight disease of the lumbar vertebræ near the kidney.

The case was interesting from its illustration of the difficulty of determining, during life, whether the abscess was dependent upon disease of the vertebræ or of the kidneys. The fact of the urine remaining healthy was a strong presumption in favour of the kidneys being unaffected. He was not aware of any means of diagnosis by which, in such cases,

we could distinguish the exact seat of the mischief.

Dr. Clendinning had a curious case of disease of the kidney under his care two years since, in which he was able to determine the nature of the malady. The patient, a man, complained at first only of debility; pain in the renal region then came on, and a tumour appeared in that part. Swelling became dull on percussion, and when emaciation had proceeded to a great extent, the kidney could be seen quite plainly, very much enlarged, through the integuments of the abdomen. After death the kidney was found much increased in size, and its pelvis was occupied by large calculi, which, from their irritation, had produced inflammation and suppuration of the organ.

Mr. Gregory Smith had seen three cases of abscess in the kidney resulting from the presence of calculi in the organ. One of these cases was that of a patient who was admitted, some years since, in a state of hectic, into St. George's Hospital. There was a large abscess pointing, and apparently about to burst in the lumbar region. Sir B. Brodie laid the abscess freely open, and on introducing his finger into the cavity, detected several loose bodies at the bottom of it; these being removed by means of a small forceps, proved to be three calculi of the size of nutmegs. The patient, a woman, lingered a short time, and sunk. The structure of the left kidney was found to be destroyed by suppuration, and there was no communication with the bladder, the ureter being impervious. In Mr. Phillip's case part of the kidney was still so far normal in structure, that it would probably perform its function. Was there any trace of purulent deposit in the urine in this case? In another case he (Mr. Smith,) recollected, in St. George's Hospital, the kidney had become enlarged to the size of a two-quart bottle, and contained a calculus which had moulded itself to the interior of the kidney. Cases of abscess pointing in the loins were interesting from the fact of their liability to be mistaken for disease of the vertebral column. He thought, however, the symptoms in the first class of cases were more of a typhoid character than they were in the second, and this would assist in our diagnosis.

Mr. Arnott remarked, that the case detailed by Mr. Phillips, and those of a similar character, were interesting chiefly from the difficulty which the practitioner experienced in determining the origin of the disease during the life time of the patient. He thought that where the abscess depended upon disease in the kidney, it was much more rapid in its progress than when it was the result of disease of the vertebræ.

Mr. Phillips said, there would still be a difficulty in this mode of diagnosis, from ignorance of the time at which we should commence our observation of the rapidity of the suppurative process.—*London Lancet.*